

Inventor: Nitesh Ratnakar
Serial No.: 10/711,859
Filed: October 11, 2004
Title: Dual View Endoscope

IN THE ABSTRACT:

Please cancel the present Abstract and insert the following new Abstract:

The present invention relates to an endoscope, more specifically to an endoscope that provides both forward view and rear view of a hollow body organ. It comprises of a rear view module that contains a rear image lens and a rear illumination bulb. The rear view module is designed and is attached to a conventional endoscope in a way that when deployed, the rear image lens and the rear illumination bulb face backward. In this position, the rear image lens provides a rear view and the rear illumination bulb illuminates the area under view of the rear image lens. The present invention enables the operator to obtain forward and rear views of a hollow organ either separately or simultaneously. The ability to obtain forward and rear view at the same time enables the operator to perform a complete examination of a hollow organ that includes both forward and rear view in a single insertion.

The present invention enables surgical procedures to be performed in areas that are otherwise inaccessible and out of view of conventional endoscopes. This is made possible by a rear instrument channel located proximal to the rear view module. The present invention also improves distension and visualization of a hollow internal organ by having a rear air/water channel also located proximal to the rear view module. The present invention widens the field of vision of conventional endoscopes by enabling the addition of more than one forward image lens and more than one forward illumination bulb.

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An endoscope system is provided for examination of a hollow body component. The endoscope system includes includes an endoscope having an outer periphery and a distal end housing a first image lens for receiving images in a first direction. The endoscope defines a hollow channel therethrough. A catheter is received within the channel of the endoscope and has proximate and distal ends. A rear view module is positioned at the distal end of the catheter and includes a second image lens. At least a portion of the module is movable between a first position and a second position wherein the second lens receives images in a second direction at an angle to the first direction.